

Appl. No.: 09/942,872
Filed: August 30, 2001
Amdt. dated 09/01/2005

REMARKS

This Preliminary Amendment is filed concurrent with a second request for continued examination (RCE), the RCE being filed in response to the final Official Action dated April 1, 2005, and the Advisory Action dated June 13, 2005. The final Official Action and Advisory Action continue to reject Claims 1-21 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,991,528 to Taylor et al. In addition, the final Official Action continues to reject Claims 1-21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More particularly, the Official Action rejects independent Claims 1, 8 and 15, and by dependency Claims 2-7, 8-14 and 16-21, as including a term the Official Action alleges is unclear.

Initially, Applicant appreciates the previous Examiner taking the time to conduct a telephone interview with Applicant's undersigned attorney regarding the final Official Action and the Advisory Action. As explained during the telephone interview and below, Applicant again respectfully submits that the claimed invention of Claims 1-21 is patentably distinct from the Taylor patent, and definite as required by § 112, second paragraph. Nonetheless, to advance prosecution of the present application, Applicant has amended independent Claims 1, 8 and 15 to further clarify the claimed invention. More particularly, Applicant has amended the independent claims to further clarify that the recited electronic simulation information has the characteristic of having been configured for simulating operation of one or more motion devices. In light of the amendments to the claims and the remarks presented herein, Applicant respectfully requests reconsideration and allowance of all of the pending claims of the present application.

As indicated above, the Official Action continues to reject Claims 1-21 under 35 U.S.C. § 112, second paragraph; and also rejects Claims 1-21 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,991,528 to Taylor et al. Each rejection will now be separately addressed.

A. Claims 1-21 are Definite under 35 U.S.C. § 112, Second Paragraph

As indicated above, in rejecting Claims 1-21, the Official Action alleges that, in Claims 1, 8 and 15, the phrase "the electronic simulation information is otherwise capable of being used to verify the operation of the at least one motion device produced by a set of operation

Appl. No.: 09/942,872
Filed: August 30, 2001
Amdt. dated 09/01/2005

information," is unclear as to the term "otherwise." To further clarify the claimed invention, Applicant amended independent Claims 1, 8 and 15 to remove the aforementioned phrase, replacing it with the phrase "the electronic simulation information having been configured for simulating operation of the at least one motion device produced by a set of operation information." As amended, Applicant respectfully submits that independent Claims 1, 8 and 15, and by dependency Claims 2-7, 9-14 and 16-21, are clear, definite and do particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Thus, Applicant respectfully submits that the rejection of Claims 1-21 under 35 U.S.C. § 112, second paragraph, is overcome.

B. Claims 1-21 Are Patentable over the Taylor Patent

The Taylor patent provides an expert manufacturing system that generates a manufacturing plan for producing a part in an automated manufacturing system. The expert manufacturing system generates a multipurpose manufacturing geometry definitions file (MGDF). The MGDF can then be used by an expert manufacturing system to generate the manufacturing plan in the form of a neutral source code file. The neutral source code can then be converted to machine-specific program code directly executable by a device controller, such as a logic controller or motion controller. The expert manufacturing system can also be used to generate a drawing of the part, as well as to simulate the manufacturing plan for producing the part.

As recited, the claimed invention of independent Claims 1, 8 and 15 provides a method, system and computer program product for controlling the operation of one or more motion devices by directly implementing electronic simulation information, where the motion device(s) comprise one or more controllable element. The method of independent Claim 1, and similarly the system and computer program product of independent Claims 8 and 15, includes extracting process information from the electronic simulation information. In this regard, the electronic simulation information is representative of information regarding the motion device(s), and is further representative of information regarding the object(s) when the motion device(s) are configured to operate on one or more objects. Also as amended, the electronic simulation

Appl. No.: 09/942,872
Filed: August 30, 2001
Amdt. dated 09/01/2005

information comprises information that has been configured for simulating operation of the motion device(s) produced by a set of operation information.

As further recited by the claimed invention, the process information can be formatted into neutral process information, where the neutral process information is in a format independent of a format of the electronic simulation information. The neutral process information can then be interpreted into operation information for each of the controllable element(s) of the motion device(s), and as such, the operation information depends on a type of the motion device(s). After interpreting the process information into operation information, the operation information can be distributed to the controllable element(s) to thereby control the operation of the motion device(s).

As previously explained, although the Taylor patent and the claimed invention are both directed to manufacturing systems, the claimed invention is patentably distinct from the system disclosed by the Taylor patent. More particularly, in contrast to the claimed invention of amended independent Claims 1, 8 and 15, the Taylor patent does not teach or suggest electronic simulation information configured for simulating operation of motion device(s), where process information can be extracted from the electronic simulation, formatted, interpreted and distributed as operation information to control motion device(s).

In response to Applicant's assertions with respect to the Taylor patent, the Official Action alleges that the claimed invention is drafted so broadly that multiple interpretations of the Taylor system read on the claims. In a first interpretation, the Official Action urges that the multipurpose manufacturing geometry definitions file (MGDF) disclosed by the Taylor patent corresponds to the recited electronic simulation information. And in a second interpretation, the Official Action alleges that the disclosed spreadsheet program, spreadsheet data files, drawing database, engineering design program and MDGF generation program may be interpreted as including the recited electronic simulation information. Applicant respectfully submits, however, that under a proper interpretation of the Taylor patent, neither the disclosed MGDF nor the spreadsheet program/spreadsheet data files/drawing database/engineering design program/MDGF generation program combination are configured for simulating operation of

Appl. No.: 09/942,872
 Filed: August 30, 2001
 Amdt. dated 09/01/2005

motion device(s), recited by amended independent Claims 1, 8 and 15 as an attribute (i.e., capability) of the recited electronic simulation information.

As explicitly disclosed by the Taylor patent and shown in FIG. 2 (reproduced below), an expert system generates, from a MGDF 80, a manufacturing plan in the form of a process data file 104. Motion/process data generation programs 110 convert neutral source code in the process data file to code, such as NC/CNC motion data, executable by device controllers, where the conversion creates code for each device controller. In addition, the motion/process data generation programs may convert the neutral source code into motion data files 114 for each device controller, where the motion data files are thereafter passed to a motion/process verification program 120. The motion/process verification program then uses the motion data files to simulate operation of the device controllers produced by the code generated by the motion/process data generation programs for execution by the respective device controllers. Taylor Patent, col. 8, ll. 17-55.

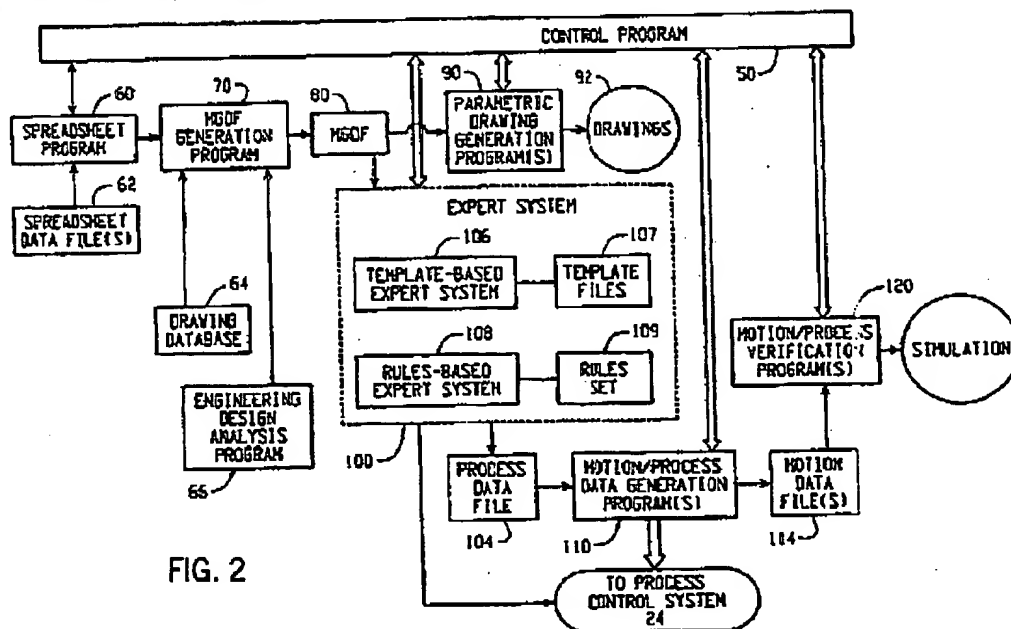


FIG. 2

Therefore, under a proper interpretation of the Taylor patent, the motion data files 114 are the only elements that could even arguably correspond to the recited electronic simulation information. In this regard, the motion data files are the only pieces of information that are

Appl. No.: 09/942,872
Filed: August 30, 2001
Amdt. dated 09/01/2005

configured for simulating operation of motion devices, as is the electronic simulation information of amended independent Claims 1, 8 and 15. Thus, to even arguably disclose the claimed invention of independent Claims 1, 8 and 15, the Taylor patent must disclose that process information is extracted from the motion data files and formatted into neutral process information. However, other than simulating operation of the device controllers, the Taylor patent does not teach or suggest any operations are performed with respect to the motion data files, much less that anything is extracted from the simulation, much less process information, as is recited by the claimed invention. And as the Taylor patent does not teach or suggest extracting process information from the motion data files, the Taylor patent likewise cannot be interpreted to teach or suggest formatting the extracted process information into neutral process information, interpreting the neutral process information into operation information, and distributing the operation information to control motion device(s), as also recited by amended independent Claims 1, 8 and 15.

Applicant therefore respectfully submits that the claimed invention of amended independent Claims 1, 8 and 15, and by dependency Claims 2-7, 8-14 and 16-21, is patentably distinct from the Taylor patent. And as such, Applicant further respectfully submits that the rejection of Claims 1-21, under 35 U.S.C. 102(b) as being anticipated by the Taylor patent, is overcome.

Appl. No.: 09/942,872
Filed: August 30, 2001
Amdt. dated 09/01/2005

CONCLUSION

In view of the amendments to the claims and the remarks presented above, Applicant submits that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicant's undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

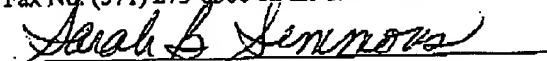



Andrew T. Spence
Registration No. 45,699

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the US Patent and Trademark Office at
Fax No. (571) 273-8300 on the date shown below.


Sarah B. Simmons


Date